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# in the Field

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**ON THE COVER**

*The Field Museum collections contain  
more than 30 million objects. Discover  
an amazing variety of objects in the  
new exhibition Specimens: Unlocking  
the Secrets of Life. See page 4.*

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*As of January 1, 2017*

# dear **member,**

At the heart of The Field Museum lie its collections: over 30 million objects documenting the diversity of life on our planet. Of these objects, approximately 28.5 million are regarded as specimens, examples of individual plants, animals, and minerals used in scientific research. (The other 1.5 million form the basis of the Museum's anthropological and ethnographic collections.) When it opens this spring, *Specimens: Unlocking the Secrets of Life* will provide an opportunity

to bring hundreds of natural wonders out of storage and into the public eye.

Each specimen has a particular story to tell, and it is the job of Field Museum scientists to uncover these stories through research. For nearly 125 years, men and women have studied the Museum's collections, bringing insight into far-ranging topics: evolution, biodiversity, environmental conservation, climate change, and even the origins of the universe.



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But the Museum's objects have more than scientific value. There is also a moral obligation to their collection and study. The dissemination of knowledge gained through these specimens is vital in our age of environmental uncertainty. Research on natural history collections will help solve global problems and provide data for the development of new vaccines, conservation methods, and ammunition in the fight against climate change. Our collections are treasures that can never be gathered again.

Your membership ensures the continued maintenance and preservation of the Museum's collections for generations to come. Thank you for supporting the research programs at The Field. With your help, new discoveries are within reach.

A handwritten signature in black ink, appearing to read 'Richard W. Lariviere'.

**RICHARD W. LARIVIERE, PHD**

PRESIDENT AND CEO



# TREASURE TROVE

Kate Golembiewski, PR and Science Communications Specialist

## Celebrating the Museum's Specimens



# 30,000,000

**THIRTY MILLION IS A BIG NUMBER. SO BIG, IT'S HARD TO FATHOM. AFTER SCANNING SEVERAL ZEROES, THE EYE SIMPLY READS IT AS "A LOT."**

Thirty million represents the number of specimens and artifacts stored in The Field Museum's collections. A selection of biological and earth sciences objects will be the focus of the Museum's newest exhibition, *Specimens: Unlocking the Secrets of Life*. Opening March 10, the show will highlight the behind-the-scenes world of the Museum's collections, delving into what The Field collects and why those objects matter.



*Specimens* serves as a continuation of the Museum's popular *Opening the Vaults* exhibition series, which includes *Mummies* (2012) and *Wonders of the 1893 World's Fair* (2013). This series pulls objects from The Field's storage areas—many of which were acquired a hundred years ago—and places them on public display, revealing the Museum's history and the important research that happens behind the scenes.

"If you've been to Members' Nights, you know the vast world we have behind the scenes in our collections areas," said Jaap Hoogstraten, Director of Exhibitions. "But for many visitors, this exhibition will be the first time they'll learn that The Field Museum even *has* collections—let alone more than 30 million objects—and that the Museum is an active research institution where scientists work and make discoveries based upon these acquisitions. For our members who have been behind the scenes, it's a chance to dive deeper into the amazing stories that these specimens can tell us."

PHOTO (LEFT): GE085679\_2c / JOHN WEINSTEIN

PHOTOS (TOP OF PAGE, LEFT TO RIGHT):  
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PHOTOS (LEFT TO RIGHT):  
GN91618\_048d / KAREN BEAN  
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GREG MERCER



Visitors to the exhibition can see some of the most amazing objects in The Field's holdings, including a giant clamshell they can touch, a nearly six-foot-long sawfish snout (or "rostrum," to use the technical term), and trays full of now-extinct butterflies with silvery-blue wings. They can also try their hand at sorting seashells into different species and walk into a reconstructed map-lined office that once belonged to a Museum curator—who glued dots onto maps to indicate the locations of water beetles.

An interactive touchscreen encourages visitors to explore ancient insects—millions of years old—trapped in amber. Remember *Jurassic Park*? Instead of extracting DNA to resurrect long-dead dinosaurs, scientists take micro-CT scans of the insects to learn more about their biology.

Most importantly, visitors can learn the stories of how The Field Museum's collections have helped shape scientific research in key and unexpected ways.

"When our scientists collect a specimen, they don't always know all the ways it will be used in the future," explained Marie Georg, the exhibition's lead developer. "We have gulls that were used to measure rising mercury levels in the oceans over time.

We have minerals that researchers analyze and compare to the chemical makeup of meteorites to learn more about the origins of our planet. When these specimens were collected—last year, in the 1950s, or the 1890s—scientists could scarcely have imagined that they'd be used in these ways."

The research data associated with these specimens and artifacts is then shared with other scientists around the world. Digitization projects record this data electronically, allowing information to be easily disseminated to researchers. (To learn more, see page 9.)

The exhibition development team worked with more than 20 members of the Museum's scientific staff to select interesting, significant, or enigmatic specimens from across the collections, and unlock the stories behind them.

"Museum collections are a way to preserve the past so that we can learn from those specimens in the future," said Hoogstraten. "If you have a specimen of a water beetle from Mexico collected in 1897, that's a little window into the past. You can never go back to 1897 Mexico, so having a specimen from that time and place is the only way for scientists to learn about it. That's why our collections are invaluable." **ITF**

*Specimens: Unlocking the Secrets of Life was organized by The Field Museum.*



## Special Member Events

### *Member and Donor Preview Days*

Wednesday, March 8, 9am–4pm

Thursday, March 9, 9am–4pm

*No reservations needed, just check in at the membership desk.*

### *Members-only Viewing and Lecture*

Wednesday, March 15, 5:30–9pm

### *Exclusive Preview for Founders' Council Donors*

Thursday, March 9, 6–9pm

Visit [fieldmuseum.org/memberevents](http://fieldmuseum.org/memberevents) for more information.

# TAWANI FOUNDATION

Ginevra Stirling Ranney, Director of Principal Gifts

## 10 YEARS OF SUPPORT

**IN 2007, COLONEL (IL) JENNIFER N. PRITZKER IL ARNG (RETIRED) MADE A HISTORIC GIFT OF \$7.3 MILLION TO THE FIELD MUSEUM.** The gift honored her father, Robert A. Pritzker, former chair of the Museum's Board of Trustees. Her investment, made through the Tawani Foundation, created one of the world's first collections-based meteoritics research programs, the **Robert A. Pritzker Center for Meteoritics and Polar Studies**.

The collection began with 170 meteorites from the 1893 World's Columbian Exposition, which Marshall Field I purchased for The Field Museum. In the past 123 years, the collection has grown

to be the largest held by a private institution. With Colonel Pritzker's support, the Museum recruited Philipp Heck, PhD, to lead the Center. He curates the collection, leads research studies about the early Solar System and Milky Way Galaxy, and advises undergraduate and graduate students interested in pursuing meteoritics and cosmochemistry (the scientific study of the chemical composition of the universe).



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Meteorites will be featured in two upcoming exhibitions:

- In January, a new **permanent meteorite display** will open in The Grainger Gallery. Four fossil meteorites will be highlighted, together with rare and interesting meteorites from the collection, including pieces from the Russian Chelyabinsk air blast in 2013.
- In March, the special exhibition, ***Specimens: Unlocking the Secrets of Life***, will feature treasures from the Museum's collections, including meteorites and minerals found in meteorites.

"Colonel Pritzker's investment has made possible a decade of growth and innovation at The Field Museum," said President and CEO Richard W. Lariviere, PhD. "Our scholars are making important new discoveries about the Universe and advancing understanding of our own planet. We are deeply grateful for the research, education and outreach opportunities her gift created and will continue to foster."

The Field Museum community acknowledges the generous support of Colonel Pritzker and the Tawani Foundation and is honored to celebrate 10 years of support for the **Robert A. Pritzker Center for Meteoritics and Polar Studies**. **ITF**

In January 2004, the Mars Exploration Rover **Opportunity** landed on the surface of the Red Planet and began sending back digital images and scientific data to Earth. Five years into its mission, **Opportunity** discovered a meteorite dubbed by NASA scientists as "Block Island." Using images of the 26-inch-wide space rock, researchers reconstructed the Martian meteorite using a 3D printer. The Field Museum's Philipp Heck, PhD, obtained the NASA files and worked with Museum staff to create a touchable replica of Block Island for the new meteorite display in The Grainger Gallery. You can see—and touch—this extraordinary object when the exhibition opens in January.



COURTESY NASA



# NEW DINOSAUR DISCOVERY

## *Gualicho shinyae*

Kate Golembiewski, PR and Science Communications Specialist

**SCIENTISTS STILL AREN'T SURE WHY SUE, THE T. REX, HAD THOSE ABSURDLY SMALL FORELIMBS, BUT APPARENTLY THEY WEREN'T UNCOMMON** in the Late Cretaceous.

A recently discovered dinosaur from Patagonia (in Argentina) had similar short, two-fingered claws. Like *Tyrannosaurus rex*, the newly described species, *Gualicho shinyae*, is a theropod, one of the two-legged, bird-like dinosaurs. But based on an unusual combination of anatomical features, scientists placed *Gualicho* on a completely different branch of the family tree from *T. rex*, meaning that the unusual limbs evolved independently rather than arising from a common short-armed ancestor.



© JORGE GONZÁLEZ AND PABLO LARA

In this artist's rendering *Gualicho shinyae* chases down prey.

Akiko Shinya  
discovered the newly  
described dinosaur,  
*Gualicho shinyae*.



PETER MAKOVICKY, PhD

The generic name *Gualicho* derives from Gualichu, a spirit revered by Patagonia's Tehuelche people. Led by Sebastián Apesteguía, PhD, of the Universidad Nacional de La Plata, Argentina, the expedition team joked about the "curse of Gualichu" whenever they ran into bad luck, like when an expedition truck rolled over. (Thankfully, everyone was okay, except for some cuts and bruises.)

The species name *shinyae* honors the discoverer, Akiko Shinya, the Museum's chief fossil preparator. "We found *Gualicho* at the very end of the expedition," explained Shinya. "Pete joked, 'It's the last day, you'd better find something good!' And then, almost immediately, I said, 'Pete, I found something!' I could tell right away it was good." **ITF**



# The Legs Have It: Recent Fieldwork in Vietnam

Petra Sierwald, PhD, Associate Curator of Zoology

## OUR PLANET IS HOME TO MORE THAN ONE MILLION DESCRIBED SPECIES OF ARTHROPODS

(described meaning those recorded by science) with many more yet to be discovered by scientists. This diverse group of invertebrate animals includes insects, spiders, crustaceans, and myriapods (millipedes and their relatives). They make their homes in nearly every habitat and proliferate in the world's warmer regions: the tropics and subtropics.

I recently returned from a three-week expedition to northern Vietnam with colleagues from the United States, Brazil, and Italy to collect, study, and describe arthropod specimens. Along with my Vietnamese colleague Anh Duc Nguyen, PhD, (Institute of Ecology and Biological Resources, Hanoi), I co-led a team collecting myriapods and arachnids (spiders and their kin) inside three national parks. We are now working to identify the specimens, describe new species, and publish the descriptions. New imaging equipment and techniques in The Field Museum's Collaborative Invertebrate Laboratories will accelerate this work.

Students collecting spiders from bushes and tree branches using a beating sheet.



VERA OPATOVA, PHD



GREG MERCER



GREG MERCER

This spider and millipede are just two of the many specimens that the expedition team collected in Vietnam.



GREG MERCER

Our Vietnamese colleagues are working intensively to survey and record the biodiversity of their country, and the expedition made contributions to the largely unexplored arthropod species of Southeast Asia. The specimens collected from the expedition will serve several major research projects, including one examining the evolution of defense secretions in millipedes and another studying the phylogeny of tarantulas and their kin. Museum collections are important for these reasons; their research can lead to practical applications for human benefit and give insight into the basic workings of the world's ecosystems.

With so many species to discover, help is needed from the next generation of scientists to continue to explore the biodiversity of Southeast Asia. During the first week of the trip, the team conducted a workshop for eight college students from Vietnam, Cambodia, and Indonesia. Each expedition member shared their special area of expertise, including collecting techniques and species identification. The students collected their own specimens using newly learned field techniques, sorted and identified them under microscopes, and presented their findings at the workshop's conclusion. When asked which specimens the students liked best, the clear winners were the diverse spider fauna of Vietnam. **ITF**

*The Vietnam expedition, research project, and student workshop were made possible through grants from the National Science Foundation.*



# Show Me the Data: Sharing Collections Information

Compiled by Franck Mercurio, Editor

**IN ADDITION TO MAINTAINING A COLLECTION OF 30 MILLION OBJECTS**, the Museum is tasked with recording and sharing data associated with these specimens and artifacts. Digitization projects record this data electronically, allowing information to be easily disseminated to researchers across the globe. Here are samples of three recent projects:

## Archaeology

Two thousand years ago, groups of people known to us today as the Hopewell thrived in southern Ohio. They left behind monumental earthworks and exquisite artifacts made from materials acquired from across the continent. The Field Museum houses one of the largest archaeological collections of Hopewell objects in the world, many on display in *The Ancient Americas*. Thanks to a collaborative digitization project conducted by

The Field Museum and the University of Nebraska–Lincoln, researchers and the general public now can access information about this enigmatic society through the website *Ohio Hopewell: Ancient Crossroads of the American Midwest* ([hopewell.unl.edu](http://hopewell.unl.edu)).



56164 / A110027c / RON TESTA

## Biodiversity

Most of the described invertebrate species—one million and counting—are small-bodied animals not well known to science. Collection data labels (the tags attached to specimens) record information about these species, but aren't very accessible. A massive undertaking led by curators Petra Sierwald, PhD, and Rüdiger Bieler, PhD, now tackles that problem. The project captures label data electronically with information and associated maps freely shared online. With postdoctoral researcher

Joan Damerow, Sierwald and Bieler are preparing to analyze large data sets to help solve problems, such as conservation and land management issues.



A110027c / RON TESTA



ALVARO DEL CAMPO

## Conservation

There are more different kinds of trees in the Amazon rainforest than anywhere else on earth, but the exact number has long been a mystery.

A team of scientists searched museum collections from around the world to confirm just how many tree species have been recorded in the Amazon, finding more than 11,000 so far. Their study relied upon digital records of museum specimens shared worldwide through aggregator websites like iDigBio.org.

"Because of digitization efforts, most of the information we needed [to make the calculation] was in the same place," said Nigel Pitman, PhD, Mellon Senior Conservation Ecologist. "We were able to use data not just from The Field Museum, but from 163 other museums around the world." **ITF**



# THE VALUE OF MUSEUM SPECIMENS

# THE TSAVO LIONS

Bruce D. Patterson, PhD, MacArthur Curator of Mammals

## THE FIELD MUSEUM IS BUILT AROUND ITS SPECTACULAR, ENCYCLOPEDIC COLLECTIONS.

Specimens and artifacts are central to the Museum's mission to document the past, understand the present, and predict and improve the future. The data associated with these objects are key, and researchers constantly strive to extend and substantiate the information surrounding the Museum's collections.



Colonel Patterson (above) poses with the "first man-eater" in 1898. The props used to support the lion's head and arms conceal his chest.



Colonel Patterson's wife, Francine, outside her home in Iver, England, in 1910 with the two Tsavo man-eaters as they appeared as trophy rugs.

This past August, the Museum outfitted the *Man-eaters of Tsavo* diorama with digital labels, featuring new data about these specimens and their history. More than a century ago, two male lions caused havoc in railroad camps in what is now southeastern Kenya. Over nine months, the lions supposedly stalked and ate 135 men before they were shot and killed by engineer Colonel J. H. Patterson. The lions' skulls and skins were later preserved as trophy rugs and taken to the Colonel's house in Iver, England (see photo left). On a lecture tour to Chicago in 1924, Patterson arranged to sell the lion rugs to The Field Museum for the then-sizable sum of \$5,000. Soon after, the rugs were expertly mounted into life-like forms by taxidermist Julius Friesser and placed on public display, where they have been ever since.

In the "trophy rug photo," the lion on the left features an obviously broken canine tooth. The other lion's mouth is closed but he possesses two conspicuous black patches of hair on his chest. Museum technicians carefully noted these associations of skins and skulls, and the identifications have been used ever since. But recent analyses call them into question. Research indicates that the two lions' skins and skulls were apparently switched in England at the time they were made into trophy rugs.

The original intention of the study was to use chemistry to estimate the number of humans the lions actually ate. Justin Yeakel, then a student, proposed an analysis of the lions' remains to quantify their man-eating habits.

Z93658  
ALAN PATTERSON / SYRACUSE UNIVERSITY PRESS



## The Lions of Tsavo

*In March 1898, the British began building a railway bridge over the Tsavo [SAH-vo] River in East Africa. Over the next nine months, two large male lions reportedly killed and ate 35 railway workers and native Africans. Crews tried to scare off the lions and built campfires and thorn fences for protection, but to no avail. Hundreds of workers fled Tsavo, halting construction on the bridge.*

*Before work could resume, chief engineer Colonel J. H. Patterson (1865–1947) had to shoot the lions and eliminate their threat. After many near misses, he finally shot the first lion on December 9, 1898, and three weeks later brought down the second. The first lion killed was measured at nine feet, eight inches from nose to tip of tail. It took eight men to carry the carcass back to camp. The construction crew returned and completed the bridge in February 1899.*



### **Want to learn more about Dr. Bruce Patterson's research on the Tsavo lions?**

You can access his paper "Cooperation and individuality among man-eating lions" online at the *Proceedings of the National Academy of Sciences* website: [www.pnas.org](http://www.pnas.org)

Because of their notoriety, the Tsavo lions have been studied far more closely than most of the Museum's 30 million specimens. But these basic specimens—simple skins and skulls—can document such intangible features as the behavior and diet of individual animals that lived more than a century ago. Collections continue to stimulate new discoveries. The potential information that can be gleaned from our vast collections is truly incalculable. **ITF**

Predators incorporate the chemical composition of their prey into their bodies ("you are what you eat"). Lions feed principally on grass-feeders such as wildebeest, zebra, and buffalo. Grass has a distinctive chemical signature, so the chemical composition of any lion that ate people will appear anomalous (because people don't eat grass), and the size of the anomaly will indicate the extent of its man-eating. Through a sophisticated analysis involving typical lions and various prey species, the research team determined that the Tsavo lions likely ate only 35 people. This number matches contemporary records of the human death toll, indicating that Patterson's 1925 estimate of 135 people was greatly exaggerated.

But the research also brought something surprising to light: the skulls and skins of the two lions were apparently mismatched by the makers of the trophy rugs.

Both bone and hair samples from the Tsavo lions were used to determine their diets. Bone offers a long-term view of diet, over several years prior to death. Hair, however, is short-lived and is replaced during each molt. Analysis of the skull with the broken, abscessed canine (belonging to the first man-eater) showed a much stronger departure from a normal diet. This was predicted, considering the "infirmary hypothesis," where incapacitated lions switch to hunting easier prey, such as humans. But it was the skin of the taxidermied "standing lion" (the one with black chest patches, see photo right) that showed the stronger "people diet" signature. Repeated analyses confirmed that the second lion's hide with black patches matched the signal from the first lion's broken-canine skull.

Chemical analyses therefore indicate that the skull of the first lion matches the skin of the second and vice versa. It now seems probable that this mismatch of skins and skulls occurred when the Colonel had his trophies made into rugs. Apparently, each skin just needed a snarling skull, not necessarily the skin's original occupant!





# Regenstein Halls of the Pacific: Connecting Past and Present

Franck Mercurio, Editor

## TUCKED AWAY AT THE FAR WEST END OF THE MUSEUM'S

*Regenstein Halls of the Pacific* is a display case containing examples of *tapa* (bark cloth) from Polynesia. Also called *kapa* in Hawaii and *masi* in Fiji, *tapa* is usually made by women. They soak strips of inner tree bark in water and pound the strips together into thin sheets of paper-like cloth. The resulting material is supple yet durable. The makers then stamp, stencil, or paint elaborate patterns on the cloth.

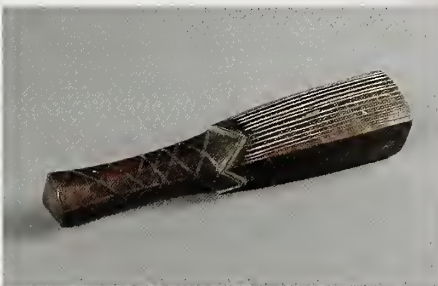
Bark cloth is still made today throughout the islands of the Pacific and is used in many ways: for clothing, blankets, or even room dividers. In earlier times, it was also used for burial shrouds and "capas" for statues of gods.

The Field Museum is displaying two modern examples inside the newly renovated introduction to the *Regenstein Halls of the Pacific*. Both are contemporary wedding dresses from Fiji made of *masi* (Fijian bark cloth) and stenciled with natural pigments (see photo top left). In addition to their Western-style appearance, these dresses incorporate contemporary touches, including cotton-cloth linings, thread, and zippers.

Mere K. Morris, who lives in Suva, Fiji's capital city, designed and made these two dresses in 2015. Christopher Philipp, Regenstein Collections Manager of Pacific Anthropology, purchased them as part of the Museum's innovative co-curation program that is reconnecting descendant communities with objects in the Museum's care.

Special displays in the reconceived introduction gallery will feature a rotating selection of objects. This renovated space is one component of a much larger "make over" for the *Regenstein Halls of the Pacific*, which showcase one of the best collections of Pacific islands artifacts in the world.

This traditional tapa beater from The Field Museum's collection was used to make bark cloth.



In addition to the new balcony entry (see photo left), other improvements will include new signage throughout the halls, a large-scale video projection and soundscape, upgraded lighting, and new digital labels. When the project is completed in late spring, the exhibition will present a fresh face to the public and connect traditional artifacts to modern-day objects. **ITF**

This project was made possible by the generous support of The Regenstein Foundation.



# WOMEN'S BOARD CELEBRATES 50 YEARS



GN81848 / HERB COMESS

**IN 1966, ELLEN THORNE SMITH AND A GROUP OF CHICAGO'S LEADING CITIZENS FORMED THE FIELD MUSEUM WOMEN'S BOARD.** Their goal was to give women the opportunity to participate in the life of the Museum and raise support for and awareness of the institution's collections, research, exhibitions, and education programs.



GN81863\_24

For information on the 2017 Women in Science luncheon, please call 312.665.7135.

WOMEN IN  
SCIENCE

Today, the board engages a dynamic group of 250 members who continue this important work. Through events and personal philanthropy, the Women's Board raises \$2.5 million each year for Museum programs.

The Women's Board is the Museum's lead partner in advancing opportunity for women in science. Since it began in 2000, the Women in Science luncheon has underwritten 18 graduate fellowships and 22 internships for high school and undergraduate women interested in pursuing science careers.

In 2016, the Museum recognized the Women's Board on 50 years of service and philanthropy. Over five decades, through events, programs, and the personal philanthropy of members and their families,

the Board has raised more than \$100 million for groundbreaking exhibitions, global research, collections maintenance, conservation efforts, and education programs for young people in Chicago. Women's Board members have also been cherished volunteers, many contributing thousands of hours working alongside museum scholars.

"We are deeply grateful for the partnership of the Women's Board and indebted to this extraordinary community for their service, generosity, and leadership," said President and CEO Richard W. Lariviere, PhD.

The entire Field Museum community congratulates the Women's Board on their 50th Anniversary. **ITF**



GN82175\_172d / KAREN BEAN

Women's Board past presidents (above, from left to right): Kathleen Klaeser, Kim White, Jeani Jernstedt, Karen Gray-Krehbiel, Bonnie Stearns, Barbara Pearlman, Laura De Ferrari Front, Nancy Nadler, Ellen O'Connor, Judy Block, and Jean Armour.

Ellen Thorne Smith (top of page) was the Women's Board first president.



Catie Boehmer, Annual Giving Manager and  
Abigail Derby Lewis, PhD, Senior Conservation Ecologist and Senior Program Manager  
for Chicago Region, Keller Science Action Center

# Responding to Climate Change in Chicago

**WHAT DOES CLIMATE CHANGE LOOK LIKE IN CHICAGOLAND?** Field Museum scientists are working to address this question and ensure the region is well equipped to meet climate challenges. Two new initiatives aim to protect and enhance local habitats—namely, Chicago’s urban forests and Lake Michigan’s dunes—in the face of climate change.

## Local trees: ready for change, or not?

Urban nature is often overlooked in the broader conversation about climate change. Yet city green spaces—and trees in particular—are crucial to filling in the gaps between larger swaths of natural landscapes. Urban trees reduce heat island effect, store carbon, absorb runoff from storm water, and provide habitat to both local species and those migrating through the area.

The U.S. Forest Service recently revised its guidelines on how to address climate change in our national forests and approached Field Museum scientists for input.

“We study urban nature, and that is a somewhat different beast,” explained Senior Conservation Ecologist Abigail Derby Lewis, PhD. “We noticed the Forest Service guidelines didn’t cover urban forests, so we suggested they consider including this critical component. The Forest Service agreed, and asked for our help in figuring out what that looks like.”

To that end, the Museum partnered with The Morton Arboretum, Chicago Botanic Garden, and Northern Institute of Applied Climate Science to pilot an urban forest climate change response plan for the greater Chicago region.



GN91975\_174d / JOHN WEINSTEIN

This is the first-ever Midwestern plan for adapting urban forests to a changing climate. Research partners assessed more than 180 regional tree species for vulnerability and adaptability to climate change. The plan also identified best practices for communities to help them maintain urban forests in the face of climate change.

This knowledge and process can be scaled across the region. Other cities can build upon the Chicago regional plan, ensuring they too are ready and able to adapt to climate change with trees as a key component.





PHOTOS (CLOCKWISE, FROM ABOVE):  
ECCO16227 / LAURA MILKERT  
ECCO3180 / JESSICA JAFFE  
GN91975\_098d / JOHN WEINSTEIN  
iSTOCK.COM / BLANSCAPE

## Neighborhoodly advice: lending a hand in the Indiana Dunes

The Indiana Dunes National Lakeshore—the closest national park to Chicago—is home to many rare plants and animals. In fact, the National Park Service ranks “the Dunes” in the top-ten national parks containing the most plant species.

In 2012, the National Park Service released its Climate Change Action Plan, providing direction on how to assess the impacts of climate change on the agency’s natural and cultural resources. Working with the Indiana Dunes National Lakeshore, Field Museum scientists will help analyze the vulnerability of dune habitats to climate change.

“For a long time, the Museum has acted as a climate science ‘translator,’” says Derby Lewis. “We help downscale national climate impact projections to a more targeted regional scale, and translate the impacts into what they mean for a particular species or natural system.

We then work with local researchers and natural resource experts to develop climate adaptation strategies they can implement.”

A few months ago, the Indiana Dunes Ecosystem Alliance developed a management plan to protect and conserve the most vulnerable habitats in the Dunes. The Field Museum is now partnering with the Alliance and Save The Dunes to assess threats to these habitats, and help develop strategies to ensure the health of species and ecosystems. The one-year project kicked off this past fall. Its outcomes will be shared later this year. Stay tuned for more information on how the Museum is helping to ensure the survival of this treasured national resource. **ITF**

Major Support:





# events



LEARNING CENTER

## ART AND SCIENCE SPOTLIGHT @ Crown Family PlayLab

Listen to storytellers, sing with musicians, and create with artists in the *Crown Family PlayLab*. Designed for children ages 6 and under. FREE.

**Third Saturday of the month /**  
**Jan 21 / Feb 18 / Mar 18 / Apr 15 /**  
**11am–2pm**

FAMILIES / KIDS / TEENS / ADULTS

## PLAYLAB ACCESSIBILITY DAYS @ Crown Family PlayLab

This new program is designed to create a private, welcoming, and tailored experience for groups of individuals with disabilities to enjoy the opportunities that the *Crown Family PlayLab* provides for hands-on learning and exploration. PlayLab Accessibility Days take place on Tuesdays when the PlayLab is closed to the general public.

Special Education school groups, community organizations, family support networks, and disability camps are able to make group reservations to ensure that they are the only group in the space for 45 minutes of fun and exploration. To pre-register, email [accessibilityeducator@fieldmuseum.org](mailto:accessibilityeducator@fieldmuseum.org). FREE.

**Tuesdays / Jan 10 / Jan 24 / Mar 7 /**  
**Mar 21 / Apr 4 / Apr 18 / May 9 /**  
**10–10:45am or 11–11:45am**

FAMILIES / KIDS / TEENS / GROUPS



LEARNING CENTER

## SUMMER WORLDS TOUR Day Camp on the Museum Campus

Summer Worlds Tour offers a week of adventures in Chicago's premier museums for children entering kindergarten through fifth grade in the fall of 2017. Children spend the week exploring exhibitions and doing hands-on activities at the Shedd Aquarium, the Adler Planetarium, and The Field Museum. Visit [www.adlerplanetarium.org/summer-camps](http://www.adlerplanetarium.org/summer-camps) to register. Registration begins February 7 at 10am. \$315, \$285 members

**1 Monday–Friday / July 10–14**  
**2 Monday–Friday / July 17–22**  
**3 Monday–Friday / July 24–28**  
**4 Monday–Friday / July 31–August 4**  
**9am–3pm**

FAMILIES / KIDS / EDUCATORS / TEENS

## DOZIN' WITH THE DINOS Join us on an overnight adventure!

Sleep over with SUE and learn about collections from Field Museum scientists, explore amazing animals, see our *Inside Ancient Egypt* exhibition by flashlight, draw live subjects like researchers do, and wrap up the night by sharing stories. Spend the night in an exhibition and see the Museum in a new way! Designed for families with children ages 6–12 years old.

*Standard Overnight:* \$65, \$60 members/groups  
*Premium Package 1:* \$78, \$68 members  
*Premium Package 2 + Tour:* \$90, \$80 members

**Select Fridays + one Saturday /**  
**Jan 20 / Jan 27 / Feb 10 / Feb 17 / Mar 3 /**  
**Mar 10 / Mar 17 / Apr 1 / Apr 7 /**  
**May 12 / 5:45pm–9am the next day**

FAMILIES / KIDS / TEENS / ADULTS



LEARNING CENTER

## DINO CAMP I spy a dinosaur! Do you?

Join us for a unique two-day summer camp exploring the world of dinosaurs. Dino Camp is an early childhood camp, designed expressly for young explorers ages 3–4 with their caregivers. Registration begins January 23 at 10am. \$76, \$67 members

**1 Tuesdays / June 6 + 13**  
**2 Wednesdays / June 7 + 14**  
**3 Tuesdays / June 20 + 27**  
**4 Wednesdays / June 21 + 28**  
**9–11:30am**

FAMILIES / KIDS / EDUCATORS / TEENS

## CURIOCITY

Explore career pathways in science and culture through this teen-only event. Hear from a Museum scientist and a cultural professional about how they became involved in their careers. FREE. Light dinner is included. Registration required. Visit [fieldmuseum.org/teens](http://fieldmuseum.org/teens) for dates and times.

FAMILIES / KIDS / TEENS / ADULTS

## DISCOVERY SQUAD

Meet the Discovery Squad! Peek behind the curtain and learn the inside scoop on the collections in our vaults. Our Discovery Squad members show you real objects from our collection, tell stories about research behind the scenes, and answer your questions. For more information, visit [fieldmuseum.org/discoverysquad](http://fieldmuseum.org/discoverysquad). FREE.

**Every Thursday through Monday /**  
**10am–3pm**

FAMILIES / KIDS / TEENS / ADULTS



For event details, program registration, and to explore the Museum's other events, please visit [fieldmuseum.org/calendar](http://fieldmuseum.org/calendar).



LEARNING CENTER

## LEARNING THROUGH COLLECTIONS

Join us on Saturdays this spring for professional development workshops focused on using real artifacts and specimens to promoting inquiry in the classroom! FREE.

**Saturdays / Jan 21 / Feb 25 / Mar 18 / Apr 22 / 9:30am–12pm**

ADULTS / EDUCATORS / PARENTS

## INVESTIGATING ARTI-FACTS Field Anthropology and Cultural Traditions

Join us as we pilot a new quarterly professional development series for teachers focused on inquiry and the social sciences. In this series, we will explore human civilizations, social emotional learning, and how Field Museum social scientists conduct their research. FREE.

**Saturday / Feb 11 / 9:30am–12pm  
Saturday / Apr 8 / 9:30am–12pm**

ADULTS / EDUCATORS / PARENTS

## 8TH GRADE BRIDGE PROGRAM

Graduating 8th graders: See what it takes to be a teen volunteer at the Field! In this week-long program, incoming freshman will work alongside teen volunteers to learn about The Field Museum and its collections. With guidance from current teen volunteers, participants will develop and showcase their very own program in Stanley Field Hall. FREE. Apply online at [fieldmuseum.org/teens](http://fieldmuseum.org/teens) between February 20 and April 9.

**1 Monday–Friday / June 26–30  
2 Monday–Friday / August 7–11  
9am–4pm**

FAMILIES / KIDS / TEENS / ADULTS



LEARNING CENTER

## FORUM @ THE FIELD

Join us for two unique educator events designed to enhance your understanding of Museum teaching and learning techniques, provide exposure to our unique and varied collections, and provide opportunities to mingle with like-minded colleagues. FREE.

**Tuesday / Mar 28 / 4–8pm  
Thursday / Apr 6 / 4–8pm**

ADULTS / EDUCATORS / PARENTS

## SUMMER TEEN VOLUNTEERS

The Teen Volunteer Program is a unique opportunity for high school students to gain public speaking, communication, science and social studies skills while getting to know teens from all over the Chicagoland area. Students also go behind the scenes and meet the Museum's scientists. FREE. Application deadline is March 12. To apply, visit [fieldmuseum.org/teens](http://fieldmuseum.org/teens).

**June 12–August 18 / 9am–4pm**

FAMILIES / KIDS / TEENS / ADULTS

## THE A. WATSON ARMOUR III RESEARCH SEMINAR

The A. Watson Armour III Research Seminar is The Field Museum's weekly academic seminar series. Talks are on Wednesdays at noon and feature speakers from around the world presenting topics related to the Museum's research and conservation activities. Talks are geared toward an academic audience, but open to members. For more information, visit [fieldmuseum.org/armour](http://fieldmuseum.org/armour).

ADULTS / EDUCATORS / PARENTS



COURTESY OF MUSIC BOX THEATRE

## CINEMA SCIENCE

In partnership with the Music Box Theatre, The Field Museum presents Cinema Science, a series of film screenings exploring scientific topics as depicted in the movies. Each month, a Museum scientist chooses a film that relates to their area of expertise and then discusses the film with the audience, post-screening.

Cinema Science takes place at the Music Box Theatre located at 3733 N. Southport Avenue in Chicago. Limited space available; advance tickets recommended. \$11

Visit [fieldmuseum.org/cinemascience](http://fieldmuseum.org/cinemascience) for a complete list of upcoming movies.

ADULTS / EDUCATORS / PARENTS

## SUMMER DIGITAL LEARNING Programs for Teens and Tweens

Digital learning programs provide a "deep dive" into research and collections at the Museum. From video production to game development, digital learning engages youth ages 12–18 using technology as a lens for investigation. Fee TBD; scholarships available. For more information and to apply online, visit [fieldmuseum.org/teens](http://fieldmuseum.org/teens).

FAMILIES / KIDS / TEENS / ADULTS

## WOMEN IN SCIENCE

Field Museum Women in Science is dedicated to inspiring, encouraging, and increasing participation of women in the sciences. Each month, the group organizes a lecture by a leading women scientist. All are welcomed to attend. For dates, times and topics, visit [fieldmuseum.org/womeninscience](http://fieldmuseum.org/womeninscience). FREE.

FAMILIES / KIDS / TEENS / ADULTS



# UNFORGETTABLE INK

Jaclyn Johnston, Director of Public Relations & Community Awareness

**WHEN TATTOO OPENED IN OCTOBER, THE FIELD MUSEUM MADE HISTORY BY UNVEILING A WORKING TATTOO SHOP INSIDE THE EXHIBITION.**



Inspired by Chicago's vibrant tattooing community, the Museum created the fully functioning tattoo parlor as an educational space for visitors to learn about contemporary tattooing practices and watch live tattooing in action. After exploring 170 objects, including ancient historical artifacts, contemporary tattoo designs, and objects from The Field's own collection, visitors conclude their exhibition experience by walking through the shop.

A black-and-white checkered floor, walls covered with tattoo designs, and tattooing tools on display give the feeling of an authentic tattoo studio found on any Windy City street corner.

Throughout the exhibition's run, six of Chicago's most recognized tattoo artists will tattoo members of the public in the shop. Each artist designed a series of natural history themed tattoos inspired by the Museum's collection and their personal artistic style. When the Museum announced the shop's opening in October, the public had the chance to call and book one of 36 appointments to get one of the specially designed tattoos, but reserving a spot wasn't easy. Appointments sold out in less than three hours and more than a thousand tattoo enthusiasts were added to the waiting list.

The tattoo shop is a brand-new addition to the exhibition, originally developed by the musée du quai Branly–Jacques Chirac in Paris and making its debut in the United States. *Tattoo* allows visitors to learn how and why people have been marking their skin as a means of self-expression and cultural identification for more than 5,000 years. As visitors to the exhibition learn, people get tattoos for many different reasons. Now, a lucky few can say they got a tattoo because they wanted to get "inked" at The Field Museum. **ITF**



ZACHARY JAMES JOHNSTON

If you don't get a chance to get inked yourself, be sure to visit [fieldmuseum.org/tattoo](https://fieldmuseum.org/tattoo) to view the live tattooing schedule and learn about the Chicago tattoo artists and their designs. The last day to see *Tattoo* is April 30.

Already have a tattoo? Share your story and follow along as The Field Museum collects tattooing stories from our Members and visitors with **#TattooFM**.

This exhibition was developed and produced by the musée du quai Branly – Jacques Chirac.  
This exhibition and related programs are supported by a generous gift from an anonymous donor.

★MUSÉE DU QUAI BRANLY  
JACQUES CHIRAC

TATTOOS: STEPHANIE BROWN



# Inspired by Specimens

After exploring *Specimens: Unlocking the Secrets of Life*, shop the exhibition store and bring home a memento reflecting your favorite part of the museum's collection—be it botany, geology, or zoology!

Remember, Field Museum members receive a 10 percent discount on all purchases in-store and online. Each purchase helps support the Museum's ongoing education and research efforts.

Visit us today at [store.fieldmuseum.org](http://store.fieldmuseum.org)  
or call 312.665.7686.



## Explore the Ancient Mediterranean

Drawing from the Field Museum's extensive archaeological collections of Etruscan, Roman, and Egyptian artifacts, a new exhibition will explore the interaction between people and cultures throughout the ancient Mediterranean from 500 BC through the first centuries AD. How did these different societies interact with one another? What were the far-reaching impacts of their relationships, across time and geography? To find out, visit the exhibition when it opens later this year.



## museum campus neighbors

### ADLER PLANETARIUM

Space is freaking awesome, and we invite you to explore it with us! Celebrate **Mars-di Gras** with us February 25–26 and learn about life on Mars. On March 25, our exhibition **Chasing Eclipses** opens immersing guests in the spine-tingling experience of a total solar eclipse and urges "All Eyes on the Sky" for the August 21 event. Adler **Earthfest** on April 22 celebrates the planet we call home. Take a selfie from space, build a telescope mount for your smartphone, and learn exciting facts about Earth, and experience our little corner of the Universe. For more details, visit [www.adlerplanetarium.org](http://www.adlerplanetarium.org).

### SHEDD AQUARIUM

Counter the long winter darkness by heading to Shedd Aquarium for a fun-filled family overnight, with dates in January, February, March and April. Enjoy dinner, animal presentations, activities and explorations, then slumber among some tropical fish friends. You'll have breakfast, too, and a chance to see the animals wake up. Get the jump on spring at the **Amphibians** special exhibit. Meet more than 40 species of frogs, salamanders and caecilians from near and far. And dive into an **Extraordinary Experience** with a penguin, shark, or marine mammal. There's plenty to do all winter long. Visit [www.sheddaquarium.org](http://www.sheddaquarium.org) to get started.



The Field Museum salutes the people of Chicago for their long-standing support of the Museum through the Chicago Park District.

Official Airline of The Field Museum





# 66th ANNUAL MEMBERS' MAY 18+19 NIGHTS



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Every year, Field Museum members are invited to explore our vast behind-the-scenes areas, which are normally off limits to the public. This is the most engaging and fun event at The Field Museum—and it's exclusively for members! At Members' Nights, you get the chance to speak with Museum staff members, including scientists, curators, and exhibition designers, to learn about all the work that happens at the Museum.

Last year at Members' Nights, members enjoyed many fun stations:

- The real life inspiration for Pokémon "species"
- A sneak peek at upcoming exhibitions before they were announced to the public
- The ever popular mammal dissection station, where members saw first-hand how specimens are cleaned and prepared
- The Digital Imaging Lab, where our plant collection is made available to researchers around the world
- New acquisitions to the Anthropology collections, including wedding dresses made from *masi* (bark cloth) now on display in the *Regenstein Halls of the Pacific*.
- The World of Insects, featuring live millipedes, beetles, ants, giant cockroaches, and more
- Our birds prep lab, featuring live dermestid beetles which help prepare bird skeletons for research and display



ED LINES, JR



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## What will you get to see this year?

Reservations are required and space is limited. Check your mailboxes in March for your invitation!

For up-to-date information, visit [fieldmuseum.org/memberevents](http://fieldmuseum.org/memberevents).